UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

IN RE ELECTRONIC BOOKS ANTITRUST LITIGATION	:	11-MD-02293 (DLC)

This Document Relates to:

ALL ACTIONS	:	

DEFENDANT APPLE INC.'S MEMORANDUM OF LAW IN SUPPORT OF ITS MOTION TO EXCLUDE OPINIONS OFFERED BY DR. ROGER NOLL IN SUPPORT OF MOTION FOR CLASS CERTIFICATION

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Defendant Apple Inc. respectfully moves the Court to strike the report of Plaintiffs' economic expert, Dr. Roger G. Noll, submitted in support of Plaintiffs' pending motion for class certification (Dkt. No. 424).

PRELIMINARY STATEMENT

This Court should strike Dr. Noll's expert report for its failure to comply with the legal standard for expert testimony required by Rule 702 of the Federal Rules of Evidence and established in *Daubert v. Merrell Dow Pharmaceuticals*, 509 U.S. 579 (1993). Dr. Noll purports to have devised a formula that can determine individual harm to each proposed class member by comparing each class member's actual book purchases against but-for prices for those particular titles on those particular days. Dkt. 424, Noll Decl. 6, 12 ("standard measure of damages" is "the elevation in price on that day due to the collusive agency model"). But in reality, Dr. Noll's formula relies on nothing more than a collection of averaged and aggregated pricing data that assumes away important individual variances, rests on baseless and untested assumptions, ignores key facts and economic realities, and in many cases results in a finding of harm where none exists. Far from identifying individual class members' injury or their damages, Dr. Noll's methodology *assumes* a class-wide injury, and calculates individual injury and damages based on a "formula"—the very mode of analysis the Supreme Court unanimously rejected in *Wal-Mart Stores, Inc. v. Dukes*, 131 S. Ct. 2541, 2561 (2011). Dr. Noll also repeatedly admitted that he undertook no independent analysis of the e-books market, as required in constructing the market "but for" the alleged conspiracy; rather, when asked about various features of the but-for world, Dr. Noll simply pointed to this Court's decision in the DOJ trial. The result of Dr. Noll's non-analysis is a view of the but-for world that is (by Dr. Noll's own admission) not based on scientific research, and is not in accord with the facts.

In his litigation consulting, Dr. Noll does not come close to employing "the same level of

intellectual rigor that characterizes" a professional economist, as Rule 702 requires (*Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 152 (1999)). Indeed, his testimony is precisely the type of unfounded and unreliable expert testimony that caused the Supreme Court and D.C. Circuit to reject class certification in *Comcast Corp. v. Behrend*, 133 S. Ct. 1426 (2013), and *In re Rail Freight Fuel Surcharge Antitrust Litig.*, 725 F.3d 244 (D.C. Cir. 2013). The Court should therefore strike Dr. Noll's report, and deny Plaintiffs' unsupported motion for class certification.[1]

FACTUAL BACKGROUND

Plaintiffs retained Dr. Noll as an expert "to determine whether anticompetitive harm arising from the conspiracy can be demonstrated for all class members, and whether the method for calculating damages to individual consumers is common to class members." Noll Decl. 4. The fundamentally flawed "methodology" Dr. Noll used to answer these questions is based on averages and overaggregated data that obscure individualized differences among the putative class members and conveniently predetermine the Plaintiffs' desired results.

Dr. Noll utilized a "before-after" approach that "uses prices that were not affected by the anticompetitive conduct to calculate competitive benchmark prices for e-books sold by the Publisher Defendants during the period in which anticompetitive conduct occurred." Noll Decl. 6. Comparing these "benchmark" prices (which in fact are drawn from the "after" period as well as the "before") with Publisher Defendant e-book prices, Dr. Noll claims that he is able to calculate e-book overcharges attributable to the conspiracy. Dr. Noll also states in his report that he is able to calculate the "overcharge . . . for each specific title that was sold by each Publisher Defendant for each retailer during each month that the agency model was in effect for that publisher" to determine whether every class member suffered individual anticompetitive

[1] Apple respectfully requests oral argument on this motion with live testimony by Dr. Noll.

harm. *Id.* at 16; *see also id*. at 7 ("proof of anticompetitive harm for every consumer in the class" can be established "using a formula that is common to class members").

In reality, Dr. Noll did nothing of the sort, admitting in his deposition that he was "not intending to produce individual damage estimates from the equation for every single transaction in the transaction record." Declaration of Christine Demana ("Demana Decl."), Ex. A ("Noll Dep.") 176:11–14. Rather, he used averaged and aggregated e-book price data across broad *categories* of e-books to calculate *average* percentage overcharges for those bloated *categories*. Noll Decl. 6.

First, Dr. Noll took the prices paid by consumers for a given e-book sold at a given retailer and averaged them across four-week periods. Next, he broke the averaged prices into broad categories. He began by splitting the averaged prices into two groups based on whether the title was on the *New York Times* bestsellers list. *Id.* at 20. Within each of those two groups, he then split the averaged prices into several other broad categories based on the title's general characteristics, such as hardcover fiction, hardcover nonfiction, hardcover advice/miscellaneous, paperback trade fiction, paperback mass-market fiction, and paperback nonfiction. *Id.* at 19. Dr. Noll misleadingly refers to his pricing data as "actual" prices, but they are not—they are mathematical averages of a highly aggregated nature. *See* Kalt Decl. ¶¶ 117-120.

Dr. Noll then compared these so-called "actual" prices for categories of e-books to the prices his regression formula predicts would have resulted "but for" the unlawful conduct from which he estimates the average percentage price increase for e-books in the various categories. Noll. Decl. 6. Dr. Noll's methodology rests on the baseless premise that any given individual's e-book purchase on a given day from a given distributor is subject to the average percentage overcharge for the (overbroad) grouping into which that purchase falls. Kalt Decl. ¶ 111. Of

course, *assuming* what needs to be *proved* (i.e., that the individual's specific experience conforms to the average of the group's experience) is a fundamental methodological error (Kalt Decl. ¶ 113)—an error that in this case renders Dr. Noll's calculations of the fact and magnitude of injury completely unreliable.

Although Dr. Noll compares e-book average prices against their "but-for" counterparts (Noll Decl. 6), he undertook absolutely no independent factual study of the "but-for" world. He brazenly claimed in his deposition that such an analysis "has no relevance to [his] report." Noll Dep. 88:13–20. Rather, he relied solely on his interpretation of the Court's July 10, 2013 opinion and various assumptions that are inconsistent with the evidence. He assumes that in the but-for world Amazon would have maintained its pricing strategy (for which he admits there is no proof), that each of the 33 million real-world purchases on the iBookstore would have been made (regardless of whether Apple entered the market), and that Barnes & Noble would have remained in the market (despite Barnes & Noble's testimony it would not have). *Id.* at 67:22-68:4, 75:18-24, 82:2-83:2, 87:2-10, 95:17-96:13. Indeed, so indifferent is Dr. Noll to the factual grounding of the but-for world that he even jettisons the Plaintiffs' liability theory that the objective of the conspiracy was to eliminate the "industry standard $9.99 price point." *See* Dkt. 432, First Amended Consolidated Class Action Compl. ¶ 13. Dr. Noll admits that he does not know how many predicted but-for prices in his model are $9.99, and baldly asserts that he does not regard it as an important question. Noll Dep. 184:10-185:23 ("I don't know why I would care to know the percentage of them that predicted 9.99").

Using his assumed but-for world and his averaging methodology, Dr. Noll "finds" that prices increased for 99.5% of e-book sales by the Publisher Defendants, resulting in total damages of over $307 million. Noll Decl. 6–7.

LEGAL STANDARD

Expert testimony offered in support of class certification must satisfy the admissibility standards of *Daubert* and Federal Rule of Evidence 702. *See*, *e.g.*, *Messner v. Northshore Univ. HealthSystem*, 669 F.3d 802, 812 (7th Cir. 2012) ("When an expert's report or testimony is critical to class certification, we have held that a district court must make a conclusive ruling on any challenge to that expert's qualifications or submissions before it may rule on a motion for class certification") (internal quotation marks omitted); *Ellis v. Costco Wholesale Corp.*, 657 F.3d 970, 982 (9th Cir. 2011) (district court correctly applied *Daubert* evidentiary standard to plaintiffs' proposed expert testimony at class certification stage); *Unger v. Amedisys, Inc.*, 401 F.3d 316, 323 n.6 (5th Cir. 2005) ("In order to consider Plaintiffs' motion for class certification with the appropriate amount of scrutiny, the Court must first determine whether Plaintiffs' expert testimony supporting class certification is reliable") (internal quotation marks and citations omitted); *Freeland v. AT&T Corp.*, 238 F.R.D. 130, 145–153 (S.D.N.Y. 2006) (Cote, J.) (applying Rule 702 and *Daubert* in denying certification in antitrust action where the plaintiff expert's regression analysis failed to account for crucial variables); *see also In re Initial Public Offerings Sec. Litig.*, 471 F.3d 24, 42 (2d Cir. 2006) (analogizing the evidentiary showing under Rule 23 to "any other threshold prerequisite for continuing a lawsuit"). Although the Supreme Court has stopped short of holding so expressly (*see Comcast*, 133 S. Ct. at 1435–36 (Ginsburg & Breyer, JJ., dissenting) (stating that Comcast had waived its "Rule 702 or *Daubert*" challenge to the admissibility of plaintiffs' expert's damages model); *Dukes*, 131 S. Ct. at 2553–54 (2011) (doubting the validity of the district court's conclusion "that *Daubert* did not apply to expert testimony at the certification stage of class-action proceedings")), "[i]t is now clear . . . that Rule 23 not only authorizes a hard look at the soundness of statistical models that purport to show predominance—the rule commands it." *In re Rail Freight*, 725 F.3d at 255.

Under Federal Rule of Evidence 702 and *Daubert*, trial courts are "gatekeep[ers]," responsible for "ensuring that an expert's testimony both rests on a reliable foundation and is relevant to the task at hand." *Daubert*, 509 U.S. at 597. The Court "is to make certain that an expert . . . employs in the courtroom the same level of intellectual rigor that characterizes the practice of an expert in the relevant field." *Kumho*, 526 U.S. at 152. There must be a "fit" to be admissible, meaning the expert's testimony must be "sufficiently tied to the facts of the case that it will aid the jury in resolving a factual dispute." *Daubert*, 509 U.S. at 591. Here, this means that Dr. Noll's opinion and statistical model must be able to show that each class member was actually harmed by the unlawful conduct and that damages can be measured for each class member through common proof. *See Perez v. State Farm Mut. Auto. Ins. Co.*, No. C 06-01962 JW, 2012 WL 3116355 at *6 (N.D. Cal. July 31, 2012) (excluding expert report and denying certification where report did not enable court to determine which potential class members had been injured, "as would be necessary to establish an ascertainable class which could be certified"); *see also Comcast*, 133 S. Ct. at 1433 (courts must engage in a "rigorous analysis" to determine whether a model establishes that damages are susceptible of measurement across the entire class); *In re Rail Freight*, 725 F.3d at 255 (plaintiffs in a putative antitrust class action must "show that they can prove, through common evidence, that all class members were in fact injured by the alleged conspiracy"); *Bell Atl. Corp v. AT&T Corp.*, 339 F.3d 294, 302 (5th Cir. 2003) ("where fact of damage cannot be established for every class member through proof common to the class, the need to establish antitrust liability for individual class members defeats Rule 23(b)(3) predominance").

Expert testimony must also be reliable. Under Federal Rule of Evidence 702, the expert's testimony must be "based on sufficient facts or data," be the "product of reliable principles and

methods," and reliably apply the principles and methods to the facts of the case. Where expert testimony is based on "subjective belief or unsupported speculation," it is inadmissible. *Daubert*, 509 U.S. at 589–90; *see also Comcast*, 133 S. Ct. at 1433 (courts must determine in an antitrust class action "whether the methodology" set forth in the expert's report utilizes "just and reasonable inference[s]" and avoids "speculative" conclusions). It is Plaintiffs' duty to demonstrate that Dr. Noll's testimony is both relevant and reliable under these standards by a preponderance of the evidence. *Daubert*, 509 U.S. at 592.

ARGUMENT[2]

I. Dr. Noll's Opinions Fall Well Short Of The Intellectual Rigor Expected Of A Professional Economist

Courts must "make certain that an expert, whether basing testimony upon professional studies or personal experience, employs in the courtroom the same level of intellectual rigor that characterizes the practice of an expert in the relevant field." *Kumho*, 526 U.S. at 152. Some (nonexhaustive) factors the Court considers are whether an expert's methodology has been tested, whether it has been subjected to peer review and publication, whether there is a known or potential rate of error, and whether the methodology has gained general acceptance in the relevant community. *Daubert*, 509 U.S. at 593–94. Dr. Noll's opinion utterly fails this standard, and should therefore be excluded.

Dr. Noll ignored several important analytical tools well accepted in his own field of economics. For example, when asked whether his regression coefficients were statistically significant, Dr. Noll testified that he "did not look at that . . . ." Noll Dep. 164:16–165:5. He

[2] This motion addresses the admissibility of Dr. Noll's opinion only as used to support Plaintiffs' class certification argument. Apple reserves its right to contest the admissibility of Dr. Noll's opinions on other subjects and at trial on the schedule established by the Court.

conceded that "standard diagnostic statistics" could be used, but he did not employ such tests because "that's not the question being addressed in the model." *Id.* at 166:15–167:1. As the Federal Judicial Center confirms, however, these tools are *required* for reliable analysis. *See* Fed. Judicial Center, *Reference Manual on Scientific Evidence* 251 (3d ed. 2011) ("[i]n practice, statistical analysts typically use levels of 5% and 1%" for determining statistical significance, and "[t]he 5% level is the most common in social science"). In fact, Dr. Noll's results do not satisfy standard statistical tests. *See, e.g.,* Kalt Decl. ¶¶ 132-140. Dr. Noll's failure to employ these techniques demonstrates his indifference to the reliability of his regression. *See*, *e.g.*, *Gen. Elec. Co. v. Joiner*, 522 U.S. 136, 145 (1997); *Allen v. Pa. Eng'g Corp.*, 102 F.3d 194, 197 (5th Cir. 1996); *Pritchard v. Dow Agro Scis.*, 705 F. Supp. 2d 471, 486 (W.D. Pa. 2010) ("where the authors found an association to not be statistically significant, an opinion may be unreliable").

Dr. Noll repeatedly attempted to excuse his failure to employ the professional standards applied in academic economics by claiming those standards did not apply to the interpretation of statistics in a litigation context. With respect to the "standard statistical significance test," he testified that "what's used in an academic paper isn't really mapped—doesn't really map accurately into litigation concepts—the issue here is not necessarily whether something [is] statistically different from zero . . . ." Noll Dep. 147:7–147:23. And when asked if the issue here was in fact whether injury was higher than zero, Dr. Noll retreated to the legal standard of proof rather than embracing the rigorous scientific standards of econometrics: "The legal problem is that's a more likely than not question. But that's why . . . there's a problem here of using that [statistical significance] terminology." *Id.* at 147:24–148:6. Dr. Noll's use of analysis developed for litigation that would not satisfy *professional* standards fails the *Daubert* standard and renders it inadmissible. *See*, *e.g.*, *Daubert v. Merrell Dow Pharm., Inc.*, 43 F.3d 1311, 1317

(9th Cir. 1995) (excluding on remand testimony where theories had been developed solely for litigation); *Nat'l Abortion Fed'n v. Ashcroft*, No. 03 Civ. 8695, 2004 WL 574799, at *3 (S.D.N.Y. Mar. 22, 2004); *Faulkner v. Nat'l Geographic Soc'y*, 576 F. Supp. 2d 609, 619 (S.D.N.Y. 2008) ("a court should consider . . . whether an expert's opinion was developed for litigation").

Dr. Noll cannot even reliably testify about the operation of his own model. When confronted with the programming that implemented his regression analysis (a print-out produced by Plaintiffs), he was able to explain very little of the coding. Noll Dep. 236:20–239:19. And when asked if he could be confident that his colleagues had faithfully implemented his directions regarding how to program his damages model, he acknowledged it was "perfectly conceivable" that the coding was inconsistent with his instructions: "I can certainly ask them and find out if they screwed up and didn't do what I told them to do. That's certainly a possibility." *Id.* at 240:21–241:2. If Dr. Noll cannot explain his regression analysis and even he cannot vouch for its accuracy, then his opinions based on that analysis are unreliable and inadmissible. *See*, *e.g.*, *Malletier v. Dooney & Bourke, Inc.*, 525 F. Supp. 2d 558, 573, 664 (S.D.N.Y. 2007) (expert testimony based on regression analysis conducted by a different analyst at expert's firm was not admissible because testifying expert lacked expertise to evaluate underlying regression analysis); *see also Dura Automotive Sys. of Ind., Inc. v. CTS Corp.*, 285 F.3d 609, 612–13 (7th Cir. 2002) (if expert relies on non-testifying assistants, expert must assure that "he supervised them carefully" and they "performed their tasks competently," especially where assistants "exercise professional judgment that is beyond the expert's ken").

Dr. Noll also completely ignored the analysis of another economist, Professor Wickelgren, who estimated damages in this very case and has reached a significantly different

(albeit still overstated) conclusion. Dr. Noll testified he had not looked at Professor Wickelgren's estimate and was "not curious" about it. Noll Dep. 227:3–7. Yet Dr. Noll could not say Professor Wickelgren's economic analysis was irrelevant, nor did he know whether it used a reliable methodology for estimating damages. *Id.* at 226:24–227:2, 230:11–231:1. Such studied ignorance of the work of fellow economists, Dr. Noll acknowledged, is a feature of his litigation consulting but not his professional academic practice. *Id.* at 229:7–16. Dr. Noll's setting aside professional standards to facilitate plaintiffs' litigation efforts also renders his testimony inadmissible. *Kumho*, 526 U.S. at 152.

II. Dr. Noll Relies On This Court's Opinion In The DOJ Case And *Ipse Dixit* Rather Than On Factual Analysis Of The "But-For" World

Dr. Noll failed to undertake any independent analysis of the e-books market, instead relying on the Court's previous order and *ipse dixit* to offer opinions about what would have happened to e-book prices but-for the alleged conspiracy. The total lack of foundation and factual support for his opinions renders his testimony unreliable and inadmissible. *See*, *e.g.*, *Major League Baseball Props., Inc. v. Salvino, Inc.*, 542 F.3d 290, 311 (2d Cir. 2008) ("An expert's opinions that are without factual bases and are based on speculation or conjecture" are not admissible); *Buckley v. Deloitte & Touche USA LLP*, 888 F. Supp. 2d 404, 413 (S.D.N.Y. 2012) (opinion was inadmissible where based on "surmise, estimate, guess or conjecture," having "no factual foundation from which to draw").

Dr. Noll's entire analysis purports to examine "the departure of market outcomes from the outcomes that would have occurred in the absence of anticompetitive conduct" (Noll Decl. 11)—that is, comparing actual market outcomes to those that would have been expected in the "but-for world." But when asked about important specific features of that but-for world, such as whether the publishers would have entered into agency contracts or the size of Amazon's market

share, Dr. Noll continuously asserted that he did not know and that it was irrelevant to his analysis. *E.g.*, Noll Dep. 87:2–10 ("I haven't done any independent analysis about what contract forms or business relationships would emerge between Amazon and individual publishers in the absence of the collusive agreement"); *id.* at 88:13–20 ("I've done no analysis" of Amazon's market share in the but-for world and "[i]t has no relevance to my report"); *id.* at 90:24–91:12 (asserting that the publisher defendants' market shares in the but-for world are "irrelevant").

Instead of relying on actual evidence, Dr. Noll simply interpreted this Court's decision in the DOJ action against Apple. *Id.* at 20:4–16. And in doing so, he mischaracterized the decision, its legal import, and the factual record.[3] For example, when asked whether he made an assumption about whether Apple would have distributed e-books in the but-for world, Dr. Noll said that he made no assumption "beyond what's stated in the opinion" and that the Court "said it's irrelevant . . . [s]o at that point I dismiss it as something I need to take into account." *Id.* at 53:13–25. The Court, however, recognized that Apple's entry into the e-books market was dependent on a number of conditions—namely, that it would have wide availability of e-books content, without windowing, and would make a profit. *See* Op. 10. Dr. Noll undertook no analysis of whether such conditions could have been satisfied in the but-for world, and simply *assumed* that all 33 million paid sales that were made through the iBookstore would have been

[3] To the extent Plaintiffs argue that Dr. Noll's analysis survives as a result of collateral estoppel, they are wrong. Dr. Noll may not displace his professional judgment in reliance on his interpretation of the Court's decision in circumstances where collateral estoppel does not bind. *See Discover Fin. Servs. v. Visa U.S.A. Inc.*, 598 F. Supp. 2d 394, 398, 401 (S.D.N.Y. 2008) (rejecting Plaintiffs' request for "expansive . . . collateral estoppel grant" and instead issuing a "limited order" that "would promote judicial efficiency while remaining fair to Defendants"; "Additionally, the Court declines to impose upon its determination a specific timeframe—the issue of temporal scope pertains more to the question of damages, and Defendants should not be prevented from making arguments as to events during the relevant time period that could affect the damage calculation."); *see also* Dkt. 409 (Apple's September 27, 2013 letter to the Court addressing collateral estoppel).

made in the but-for world. *See* Noll Dep. 95:17–96:13. Likewise, Dr. Noll disregarded record evidence that Barnes & Noble would have exited the e-books market in the "but-for" world, as its business model of matching Amazon's e-book prices was not sustainable. Orszag Decl. ¶¶ 117-23. Instead, Dr. Noll asserted that Barnes & Noble's profitability was "irrelevant to anything [he] did in [his] report" (Noll Dep. 82:15–83:2), despite recognizing that if he "assumed that Barnes & Noble could not continue to match Amazon's prices in the but-for world" and that "the market is competitive," then "Barnes & Noble would exit," and "Amazon would start to be a complete monopolist." *Id.* at 82:2–14.

In fact, Dr. Noll admitted that he performed no factual study or independent analysis of the key facts underlying his opinions. For example, he refers multiple times in his report to Amazon's pricing "formula," *i.e.*, its algorithm (*e.g.*, Noll Decl. 10 n.3, 20, 21-22), but he conceded that he has "no clue what's inside the Amazon pricing algorithm" (Noll Dep. 67:22–68:4), and acknowledged that he does not know how the algorithm worked or when it changed, *id.* at 62:8–63:6. Dr. Noll also acknowledged that Amazon offers discounts to consumers but he did not account for those in his model, and could not answer the question whether Amazon charged different prices on the same day for different consumers. *Id.* at 64:24–65:9, 65:23–67:21.[4] Dr. Noll's failure to consider important variables impacting price renders his regression model incomplete and unreliable. *See Freeland*, 238 F.R.D. at 147 (finding the regression

[4] Dr. Noll also fails to account for the fact that not all titles that were published or purchased by consumers necessarily would have been published or purchased in the but-for world. For example, as this Court found, the Apple agency model prompted Amazon to respond by increasing the self-publisher royalty from 35% to 70%. *See* Op. 68–69. When asked if Amazon would offer self-publishers a 70% royalty in the but-for world, he said "I have no idea what they would have adopted in the but-for world in terms of the specific contracts form with independent publishers." Noll Dep. 58:9–15. Yet Dr. Noll's model assumes that all "titles that were offered" in response to the significantly higher royalty "would have been offered" in the but-for world. *Id.* at 106:5-10.

performed is "so incomplete as to be inadmissible") (internal citation and quotation omitted); *In re Graphics Processing Units Antitrust Litig.*, 253 F.R.D. 478, 492 (N.D. Cal. 2008) (finding that an analysis that failed to account for "the[] kinds of specialized deduction," such as discounts, "that will vary across consumers and may even vary for the same consumer over different purchases" would "produce erroneous estimates of the but-for prices").

Dr. Noll's damages calculations cannot stand without his false assumption that pricing dynamics in the but-for world were the same as in the pre-agency world. *See* Kalt Decl. ¶ 114-116. For example, when this assumption is adjusted to assume that prices before and after the agency agreements took effect are not perfectly correlated, Dr. Noll's model finds that more than 16% of class members' transactions have no (conclusively "negative") damages—a far cry from the 0.5% that Dr. Noll reports. *See id.* ¶ 139, Fig. 34A. Given the evidence suggesting that many e-book buyers bought only one or two ebooks in the class period (*see id.* Fig. 8), this implies that millions of class members were not damaged according to Noll's own model, and completely undermines the reliability of Dr. Noll's conclusion that "the requirement to show class-wide anticompetitive harm is satisfied." Noll Decl. 6. An opinion "based upon demonstrably false assumptions" (*Tse v. Ventana Med. Sys.*, 123 F. Supp. 2d 213, 227 (D. Del. 2000), *aff'd* 297 F.3d 310 (3d Cir. 2002)), cannot assist a trier of fact as a matter of law. *See also Virgin Atl. Airways, Ltd. v. British Airways PLC*, 69 F. Supp. 2d 571, 578 (S.D.N.Y. 1999) (rejecting expert opinion "based on assumptions that have not been supported by the data").

III. Dr. Noll's Regression Analysis Does Not Reliably Fit The Data

Because Dr. Noll's analysis cannot show common injury or a common method for proving damages, his opinion is not "sufficiently tied to the facts of the case that it will aid the jury in resolving a factual dispute." *Daubert*, 509 U.S. at 591. At the class-certification stage,

Plaintiffs must be able to demonstrate through common proof that each class member was injured by Apple's conduct, and if so, by how much. *Comcast*, 133 S. Ct. at 1433; *In re Rail Freight*, 725 F.3d at 255. Here, Dr. Noll purports to offer such common proof in the form of an "econometric model that implements a hedonic price formula" (Noll Decl. 6), but an examination of that model reveals that it does not sufficiently "fit" the data such that it could be reliably used as a common formula to estimate class members' damages.

"R-squared" provides a measure of the overall "goodness-of-fit" of a regression analysis. ABA Section of Antitrust Law, *Econometrics: Legal, Practical, and Technical Issues* 409 (2005). Although Dr. Noll claims that his model has a 90% "adjusted R-squared" and thus supposedly explains 90% of the variation in the data, that statistic does not indicate how well his model explains the variation within an *individual* title's prices. Kalt Decl ¶ 134. It thus cannot show how reliable Dr. Noll's damages model is for demonstrating individual damages—one of the primary objectives of his report at class certification.

Dr. Noll ignored the more relevant "within R-squared" statistical test, which is only 12% for his model (*id.*), claiming he "didn't think carefully about which [statistical test] to report." Noll Dep. 150:8–13. He admitted, however, that an R-squared of 12% tells him "that within a month-long period, there's a lot of variation in price around the average price," which cannot be explained by his model. *Id.* at 186:20–187:1. Without being able to reliably explain why the prices of individual book titles varied significantly, Dr. Noll's model is hopelessly unable to aid the Court in showing that each class member paid more for his e-books because of Apple's conduct. *See Amorgianos v. Nat'l R.R. Passenger Corp.*, 303 F.3d 256, 270 (2d Cir. 2002) (affirming exclusion of expert testimony where "analytical gap between the studies on which she relied and her conclusions was simply too great" and opinion was "thus unreliable"); *In re*

Rezulin Prods. Liab. Litig., 369 F. Supp. 2d 398, 426–27 (S.D.N.Y. 2005) (finding expert testimony unreliable where the "analytical gap between the research and the conclusions the experts would draw" was "sufficient to warrant exclusion of the testimony in question").

The poor fit of Dr. Noll's model to the underlying purchase data is also demonstrated by the millions of false positives generated by his approach. As Professor Kalt explains, adjusting for Dr. Noll's unsupported assumption that pricing dynamics in the but-for world were the same as in the pre-agency world reveals that prices did not increase in almost 16% of the e-book transactions that occurred after the agency agreements took effect—a far cry from the 0.5% that Dr. Noll reports. Kalt Decl. ¶ 139. This amounts to approximately 24 million consumer transactions. *Id.* Yet Dr. Noll's model does not account for most of these transactions, instead obscuring them within groupings of e-books that experienced "average" percentage overcharges, which leads him to conclude that 99.5% of e-book prices increased. *Id.* These transactions thus represent "false positives" generated by Dr. Noll's model (*id.*), which are damning evidence of the unreliability of Dr. Noll's opinions. *See Nadell v. Las Vegas Metro. Police Dep't*, 268 F.3d 924, 928 (9th Cir. 2001) (holding that district court properly excluded evidence that had "tendency to produce 'false positives'"), *abrogated on other grounds*, *Beck v. City of Upland*, 527 F.3d 853, 862 n.8 (9th Cir. 2008); *see also In re Rail Freight*, 725 F.3d at 254 (holding that the court had no way of evaluating the accuracy a damages model's overcharge calculations for class members where the model had yielded false positives for non-class members).

Dr. Noll's model does not even conform to Plaintiffs' theory that more e-book titles would have been priced at $9.99 absent the agency agreements. *See generally* Dkt. 432, First Amended Consolidated Class Action Compl. ¶ 13 (referring to the pre-agency, "industry standard $9.99 price point"). Dr. Noll admits that he does not know how many predicted but-for

prices in his model are $9.99, and baldly asserts that he does not regard it as an important question. Noll Dep. 184:10–185:23 ("I don't know why I would care to know the percentage of them that predicted 9.99"); *see also id.* at 184:17-24 ("Q: If your model predicted [what] only one percent of the prices in the but-for world were, would that cause you to reexamine the reliability of your model? A: Not necessarily. I'd have to know a lot more."). But that is a critical question at the class certification stage. "[A]ny model supporting a plaintiff's damages case must be consistent with its liability case, particularly with respect to the alleged anticompetitive effect of the violation." *Comcast*, 133 S. Ct. at 1433 (internal quotation marks omitted). Because Dr. Noll's model is not consistent with Plaintiffs' theory, "it cannot possibly establish that damages are susceptible of measurement across the entire class for purposes of Rule 23(b)(3)." *Id.* The model therefore cannot aid in the resolution of any question at this stage of the proceedings. *Amorgianos*, 303 F.3d at 270; *In re Rezulin Prods. Liab. Litig.*, 369 F. Supp. 2d at 426–27 (finding expert testimony unreliable where the "analytical gap between the research and the conclusions the experts would draw" was "sufficient to warrant exclusion of the testimony in question").

IV. Dr. Noll's Methodology Comprehensively Fails To Identify Individual Class Member Injury Or Damages

Dr. Noll's formula does not determine individual harm to each proposed class member (as he claims it does); his methodology relies on *averaged* and overaggregated data that completely fails to identify *individual* class member injury or damages. This failure renders his opinion inadmissible, because it is not "relevant to the task at hand"—determining whether *individual* injury and damages can be proved class-wide. *Daubert*, 509 U.S. at 597; *see also Comcast*, 133 S. Ct. at 1430 (to establish predominance, plaintiffs must show that "individual injury" and damages can be proved through class-wide evidence).

Dr. Noll admits that, with the exception of allocating damages among states by zip code, he has "not analyzed the individual transaction data," let alone run regressions on that data. Noll Dep. 156:8–157:3. In fact, he admits he did not even look at individual purchase data and knew nothing about e-book purchasing patterns. *Id.* at 179:8–20, 217:21–218:1. For example, he was not even certain if he could use transaction records to determine whether a class member purchased twenty e-books, as opposed to a single title. *Id.* at 218:9–219:2 ("I'm not absolutely certain, but I thought we could probably do it from the transactions records").

Instead, Dr. Noll's estimated e-book percentage overcharges are derived from *average* e-book prices over four-week periods that are *aggregated* into meaningless e-book categories of Dr. Noll's own construction—not from prices for individual titles. Noll Decl. 6, 19-20; *see also* Kalt Decl. ¶ 117-124. For example, he aggregates a variety of different book genres, including romance, mystery, and science fiction, into his "fiction" category, but the only basis he offers for such aggregation is the fact that a *New York Times* Bestseller list exists for the "fiction" category. Noll Dep. 158:8–22; *see also* Demana Decl., Ex. E ("Davis Dep.") 63:5–13 (acknowledging distinct genres falling within "fiction" category). Dr. Noll does not offer any economic basis, other than his "say-so," for assuming that prices of titles within such different genres would behave similarly. *See* Noll Dep. 158:23–159:16 ("Well, they would have to"). Further, as explained above, the averaging of price data over four-week periods ignores significant daily fluctuations in price. *Id.* at 186:20–187:7 (admitting that "within a month-long period, there's a lot of variation in price around the average price" that his model cannot explain). Yet Dr. Noll's conclusion that 99.5% of e-book prices increased is based on those averages, and not on damages calculated for individual titles. *Id.* at 192:13-194:12. Indeed, Dr. Noll admitted that he could not calculate a predicted overcharge for a given title based on the coefficients contained in his

Exhibit 1. *Id.* at 191:20-192:3.

The averaged and aggregated percentage overcharges that Dr. Noll calculated are nothing more than a "fictional composite" that masks "the disparate individuals behind the composite creation." *Broussard v. Meineke Disc. Muffler Shops, Inc.*, 155 F.3d 331, 345 (4th Cir. 1998); *see also In re Graphics Processing*, 253 F.R.D. at 493 ("If data points are lumped together and averaged before the analysis, the averaging compromises the ability to tease meaningful relationships out of the data"). In addition, Dr. Noll's reliance on averaged and aggregated data, and his failure to account for individual variation among titles in the periods before and after the agency agreements took effect lead to millions of false positives, rendering his opinions completely incapable of reliably demonstrating that each individual was injured, let alone by how much. *See Nadell*, 268 F.2d at 928; *R.F.M.A.S., Inc. v. So*, 748 F. Supp. 2d 244, 274–75 (S.D.N.Y. 2010) (excluding testimony where experts "failed to do the investigation necessary to equip themselves with the information necessary to quantify plaintiff's damages"); *see also Comcast*, 133 S. Ct. at 1433; *In re Rail Freight*, 725 F.3d at 255.

V. Dr. Noll's Regression Analysis Assumes His Conclusion And Forces A Positive Overcharge Estimate

Dr. Noll's methodology *assumes*, rather than *proves*, common impact. He opines that "the requirement to show class-wide anticompetitive harm is satisfied," based on his finding that "anticompetitive conduct by the defendants caused prices to be higher for e-books that account for 99.5 percent of e-book sales." Noll Decl. 6. But examining the analysis on which this finding is based reveals that an *assumption* of common impact is built into Dr. Noll's methodology.

Inherent in Dr. Noll's methodology is the assumption that *all* proposed class members that purchased titles within a certain category were either injured or not, regardless of whether an

individual purchaser actually paid more for a specific title as compared to the but-for price of that title on the same day. *See* Kalt Decl. ¶ 111. Specifically, Dr. Noll's opinion of class-wide anticompetitive harm rests on his estimated overcharges, which, as described above, are based on averaging e-book prices and aggregating them into different categories. The percentage overcharge for each category of e-books is either positive or negative—an effect that he then applies to each price of the titles within that category, regardless of whether that title's price actually went up or down after the agency agreements were implemented. *See id.* ¶ 120.

For example, as illustrated by Dr. Kalt's Figure 22, four titles within a certain category could each have an overcharge of $3.00, resulting in an average overcharge of $3.00. But in an alternative scenario—ignored by Dr. Noll—one title could have a $12.00 overcharge, while the other three titles have no overcharge, still resulting in an average overcharge of $3.00. In another case, one title could have an overcharge of $12.00, another could have an overcharge of $6.00, and two titles could have *negative* overcharges of $3.00, still resulting in an average overcharge of $3.00. In all three situations, Dr. Noll's model would simply calculate an average overcharge of $3.00 and conclude that purchasers of each of those titles were similarly harmed.

Accordingly, Dr. Noll's averaging methodology assumes common impact—even where there is none. "If one is attempting to test whether there is an effect on all members of a proposed class," such an assumption of common impact "is not valid as it assumes the very proposition that is being tested." ABA Section of Antitrust Law, *Econometrics: Legal, Practice, and Technical Issues* 222 (2005). By applying these common overcharges, Dr. Noll has "evaded the very burden that he was supposed to shoulder." *In re Graphics Processing Units*, 253 F.R.D. at 493.

CONCLUSION

For these reasons, this Court should strike Dr. Noll's report and testimony.

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